Montana
Office of Public Instruction
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A Treasure Hunt through a portion of the
Common Core State Standards for Mathematics
Answer Key

Please use the Mathematics Common Core State Standards (MCCS) to search with others at your table (in groups of 2, 3, or 4) to navigate through this new document and find the answers to the following questions:

1. What are Mathematical Practices? The standards about process or habits of mind, about perseverance, problem solving, reasoning and explaining, modeling and using tools, seeing structure and generalizing; "Doing Math"

2. In the Standards for Mathematical Practice section, where is the reference to technology located?
   Page 7—8: Mathematical Practice 5, Use appropriate tools; and Connecting the Standards for Practices to Standards for content (Note: technology is a tool for use with standards, therefore not explicitly stated in all the standards you would include technology)

3. Find the guide labeled "How to read the Grade Level Standards". Complete the chart to clarify the terms used in Mathematics Common Core Standards. Page 4 for definitions (Note: the examples vary, first are domains, then clusters, then the standards which go from general to very explicit statements. It is suggested that the clusters statement is written out on the board as the objective as well as helps manage units)

Define Term	Example of	How can you identify
Standard define what students should understand and be able to do.	K.OA.5 5. Fluently add and subtract within 5.	The numbered statements under the bolded cluster statement.
Domain: larger groups of related standards. Standards from different domains may sometimes be closely related	Possible answers: Counting & Cardinality (CC), Operations and Algebraic Thinking (OA), Number and Operations in Base Ten (NBT), Number Operations-Fractions (NF), Ratio and Proportional Relationships (RP), The Number System (NS), Geometry (G), Measurement and Data (MD), Expressions and Equations (EE), Functions (F), Statistics and Probability (SP)	Shaded title in K-12 document or top shaded title above grade level column in Grade-Band document

Cluster: summarizes a group of related standards. Note that standards from different clusters may sometimes be closely related, because mathematics is a connected subject.	Use place value understanding and properties of operations to perform multi-digit arithmetic.	Bold statement prior to the numbered standards, underlined in the Grade-band document

4. What does the Introduction and Overview section for each grade and conceptual category include? Introduction explains what the instructional time should focus on for that grade level and explains the mathematics of those critical areas. The Overview organizes the standards into domains and clusters.

5. What four critical areas should instructional time be focused on in Grade 2?
   Page 17: base-ten notation, fluency with addition and subtraction, standard units of measure, and describe and analyze shapes (Note: grades K-3 build number sense, even in measurement and shapes it is about number)

6. What is the first grade-level that students are expected to be proficient with a fraction concept?

   Third grade is the beginning of Number and Operations-Fractions. Developing understanding of fractions as a number, represent fractions on a number line diagram, explain equivalence, and compare. (Note: no operations occur in third, is about building fraction sense)

7. What is the one standard Grade 4 students must know and be able to do with data? What concept is connected to this standard?

   Page 31: make a line plot using a data set with unit fractions; addition and subtraction of fractions (Note: data is used to understand a math concept)

8. What new Domains start in Grade 6? Ratios and Proportional Relationships (RP), The Number System (NS), and Expressions and Equations (EE), Statistics and Probability (Note: the Domains in K-5 build understanding for these new Domains)

9. Function begins in Grade 8. What do students need to know and be able to do with functions?

   Page 53: clusters – define, evaluate, compare functions and use functions to model relationships between quantities; Page 55 are specific standards

10. How are the 9-12 Standards organized? Page 57 (Note: standards are organized by conceptual categories Not by courses)

1. Number and Quantity
2. Algebra
3. Functions
4. Modeling
5. Geometry
6. Statistics and Probability

11. What is unique about high school "Modeling"? *"Modeling is best interpreted not as a collection of isolated topics but rather in relation to other standards. Making mathematical models is a Standard for Mathematical Practice, and specific modeling standards appear throughout the high school standards indicated by a star symbol* (★)."

12. What does the (+) symbol mean in the 9-12 sections? The (+) symbol denotes those standards for student going into Science, Technology, Engineering, Mathematics (STEM) fields of study.

13. What is the purpose of Tables 1 and 2 at the end of the document? Table 1 and 2 organize the situations for adding, subtracting, multiplying and dividing that all students should understand. Presenting students with all of these situations for the operations with whole numbers builds deeper understanding than only presenting one (e.g., add to for addition or arrays' for multiplying)

14. What page did you find Indian Education statement(s) embedded in the standards? Answers will vary.

15. What is an **Ah ha** you have about the Common Core State Standards? **Ah ha:**
